

a processing mechanism for producing symbol character data in a form representative of the scanned code symbol,

a synthesizing mechanism for synthesizing a group of data packets, each having a plurality of data fields containing codes for identifying the code symbol reading device synthesizing the data packet in the group thereof, a data packet number for identifying each said data packet, a data packet group number for identifying the group to which each said data packet belongs, and a sequence of digital data bits representative of the symbol character data, and

an RF signal generator for generating an electromagnetic signal having its frequency modulated by the digital data bits representative of said group of data packets, and transmitting said modulated signal over a predetermined data transmission range in free space,

wherein the frequency deviation of the signal produced by each said code symbol reading device is substantially the same and equal to a preselected frequency deviation value; and

(B) a plurality of base units, each said base unit being assigned to one said code symbol reading device, and positionable within the predetermined transmitting range thereof, and including

a receiver for receiving a modulated carrier signal transmitted from said any one of the code symbol reading devices,

a demodulator for demodulating any one of the received modulated carrier signals so as to recover at least one data packet therefrom,

a processing mechanism for analyzing the recovered data packet to determine whether the received data packet was synthesized by its assigned code symbol reading device, and if so, then recovering the symbol character data therefrom.

a buffer for buffering the symbol character data recovered from the data packet synthesized by the preassigned code symbol reading device, and

a notification mechanism for automatically producing, in response to the recovery and buffering of the symbol character data, an acknowledgement signal perceptible to the user of the assigned code symbol reading device when the user is situated within the predetermined data transmission range, so as to inform the user of the code symbol reading

device that the symbol character data produced thereby has been received and recovered at the assigned base unit. --

<sup>88.</sup> The system of claim 87, wherein each said code symbol reading device comprises a laser diode for producing a visible laser that is repeatedly scanned across the code symbol. --

<sup>87.</sup> The system of claim 87, wherein the acknowledgment signal comprises an acoustic signal audible to the user of the code symbol reading device when the user is situated within the predetermined data transmission range. --

<sup>88.</sup> The system of claim 89, wherein the acknowledgement signal further comprises a light signal visible to the user of code symbol reading device when the user is situated within the predetermined data transmission range. --

<sup>89.</sup> The system of claim 89, wherein the acoustic signal produced by each said base unit has at least one uniquely identifiable pitch characteristic assigned to the preassigned code symbol reading device. --

<sup>90.</sup> The system of claim 87, wherein each said base unit comprises a circuit tuned to the preselected frequency, and a receiving element operably associated with the circuit, for receiving the modulated carrier signal transmitted from any one or more of said code symbol reading devices. --

<sup>91.</sup> The system of claim 87, wherein each said base unit further comprises data interface circuitry for interfacing the data output port of a computer keyboard with the data input port of a computer system, and a data conversion mechanism for converting the data format of the symbol character data recovered at the base unit into a data format which is substantially identical to the data format of data produced from the output of the computer keyboard. --

<sup>92.</sup> The system of claim 87, wherein each said base unit further comprises a data processing unit selected from the group consisting of: a slot-type bar code symbol reader, a projection-type bar code symbol reader, a cash register, a host computer system, and a portable collection device. A-